

Translation

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PATENT COOPERATION TREATY

PCT/JP2003/014343



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd PCT/PTO 10 NOV 2005

Applicant's or agent's file reference H1909-01	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/014343	International filing date (day/month/year) 12 November 2003 (12.11.2003)	Priority date (day/month/year) 12 November 2002 (12.11.2002)
International Patent Classification (IPC) or national classification and IPC H01S 5/022, G02F 1/377, G02B 6/42		
Applicant MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 31 May 2004 (31.05.2004)	Date of completion of this report 01 March 2005 (01.03.2005)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/014343

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

- These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:
- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	2-15, 17-19	YES
	Claims	1, 16	NO
Inventive step (IS)	Claims	3, 6-8, 17-19	YES
	Claims	1, 2, 4, 5, 9-16	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO

### 2. Citations and explanations

The following documents are cited in the ISR:

Document 1: EP, 1041419, A1 (NEC Corp.), 4 October, 2000 (04.10.00)

Document 2: Microfilm of the specification and drawings annexed to the written application of Japanese Utility Model Application No. 52516/1980 (Laid-open No. 154173/1981) (Fujitsu Ltd.), 18 November, 1981 (18.11.81)

Document 3: JP, 2001-242499, A (NGK Insulators, Ltd.), 7 September, 2001 (07.09.01)

Document 4: JP, 2001-242349, A (Kyocera Corp.), 7 September, 2001 (07.09.01)

Document 5: US, 6261858, B1 (Matsushita Electric Industrial Co., Ltd.), 17 July, 2001 (17.07.01)

#### Claims 1 and 16

The subject matters of claims 1 and 16 do not appear to be novel in view of documents 2 and 4.

It is commonly used art, for example, as also disclosed in document 2 {especially Fig. 4 (a) and (b)} and document 4 (especially the last sentence of paragraph 0029), that (1) a groove parallel to the emission end face of a semiconductor laser is formed on a sub-mount at the portion where an optical waveguide device and the said semiconductor laser achieve optical coupling, and (2) the adhesive layer of the said optical waveguide device ranges from the position in contact with the edge of the said groove far away from the said semiconductor laser into the groove.

#### Claims 2 and 11-14

The subject matters of claims 2 and 11-14 do not appear to involve an inventive step in view of documents 2 and 4. The dimensions and distances of respective portions are considered to be generally used values.

#### Claims 4, 5, 9, 10 and 15

The subject matters of claims 4, 5, 9, 10 and 15 do not appear to involve an inventive step in view of documents 2-5. The commonly used art as disclosed in documents 2 and 4 is also considered to be used, of course, in the second harmonic generation device as disclosed in document 3 or 5 (especially Figs. 15 and 16). Document 5 discloses that (1) grooves parallel to the emission end face of the said semiconductor laser are formed at several places on a sub-mount including both the vicinity of the incident end face and the emission end face of the said second harmonic generation device, and (2) an adhesive layer is formed along these grooves. The intervals between the grooves are considered to be a mere matter of design variation that a person skilled in the art could have decided as required.

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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of : V

Claims 3, 6-8 and 17-19

The subject matters of claims 3, 6-8 and 17-19 are neither described in any one of the documents cited in the ISR nor obvious to a person skilled in the art.